

present disclosure. For example, many phosphate protecting groups such as 2-cyanoethyl [phosphate]are capable of undergoing β -elimination. Accordingly, any reagent capable of cleaving the phosphate protecting group from the oligonucleotide by β -elimination may be used. Organic amines such as primary, secondary or tertiary amines that can remove the phosphate protecting group without cleaving the oligonucleotide from the substrate are preferred. More preferred are amines with the formula R-N-R₁R₂, wherein R, R₁ and R₂ are independently hydrogen, hydroxy, alkyl, allyl, aryl, cycloalkyl, alkenyl, alkoxy, allyloxy, aryloxy, and may include from one to twenty carbon atoms. Most preferred are t-butylamine-methylamine and diethylamine, in particular a solution of about 20% v/v diethylamine in anhydrous acetonitrile.

In the Claims

Please amend claim 6 as follows:

6. (twice amended) The method of Claim 5, wherein the phosphate protecting group is a 2-cyanoethyl [phosphate]group.

Please amend claim 15 as follows:

15. (once amended) A method for purifying an oligonucleotide that comprises:

- providing an oligonucleotide containing a phosphate protecting group attached to a substrate, wherein the phosphate protecting group is 2-cyanoethyl[phosphate];

- b) contacting the oligonucleotide with diethylamine to cleave the phosphate protecting groups from the oligonucleotide without detaching the oligonucleotide from the substrate;
- c) isolating the oligonucleotide attached to the substrate from the cleaved phosphate protecting groups; and
- d) contacting the oligonucleotide attached to the substrate with ammonium hydroxide to cleave the oligonucleotide from the substrate.

Conditional Petition for Extension of Time

If any extension of time for this response is required, Applicant requests that this be considered a petition therefore. Please change the required Petition fee to Deposit Account No. 500-588.

Additional Fee

Please charge any insufficiency of fees, or credit any excess to our Deposit Account No. 500-588.

Remarks

Applicant respectfully requests reconsideration and allowance of this application in view of the amendments above and the following comments. Applicants respectfully submit that the amendments are fairly based on the specification and respectfully request their entry. A version of the marked up specification paragraphs and claims showing the